

PATENT**REMARKS**

Retraction of the holding of finality and reconsideration of the rejections set forth in the Office action dated 7/1/2004 is respectfully requested under the provisions of 37 CFR §1.114.

Claims 1-3, 6-10, 12-15, 18-21, 23 and 25-31 were pending.

Claims 32-40 are new.

Claims 1-3, 6-10, 12-15, 18-21, 23 and 25-31 stand rejected.

Claims 4, 5, 11, 16, 17, 22, and 24 have been previously canceled.

Claims 35-37 correspond to previously canceled claims 4, 5 and 11 respectively.

Claims 38-40 correspond to previously canceled claims 16, 17 and 22 respectively.

Claims 1, 12 and 31 were amended to further clarify the claimed subject matter.

Applicant hereby petitions for a one month extension. The final office action was mailed on 7/1/2004; the RCE and Amendment were filed on 11/1/2004. The fees for the RCE, additional claims and extension are authorized to be charged to deposit account 24-0025.

Drawing Status

Applicant mailed formal drawings to the PTO on 5/17/04. The Office Action Summary does not indicate that the Examiner has approved these formal drawings. Applicant respectfully requests that the Examiner either approve these formal drawings and so indicate on the next office action summary, or contact the applicant's attorney Mr. Daniel B. Curtis at 650 812 4259 to arrange for a replacement set of drawings if needed.

PATENT**Introductory Remarks**

Applicant believes a short summary of the claimed invention may be useful for the Examiner.

One problem addressed by the invention is that of being able to determine an original document from a counterfeit or copied document.

The claimed invention addresses this problem by providing marks on a marking medium. These marks have overt characteristics, covert characteristics or both covert and overt characteristics. Marks with covert characteristics are indistinguishable to the human eye from marks with overt characteristics. One example of such a covert characteristic is the inclusion of a taggant in the toner used to place the mark on the marking medium. In this example, marks with the covert characteristic are completely indistinguishable to a human from marks without the covert characteristic. Specialized detection equipment is required to detect marks with the covert characteristic. This and additional examples of covert characteristics can be found starting at page 10, line 1 and extending to page 12, line 3 (see also: the last paragraph on page 4 starting about line 17 through page 5 line 4). One of the covert characteristics can be image modulation obtained by small translations of the mark, or of gray-scale modulations of the mark in intensity or size so long as these modulations are sufficiently small to be difficult to detect or reproduce.

Overt characteristics include characteristics such as the shape of the mark, the rotation of a glyph, human visible spacing between marks, color of the marks etc. Each overt characteristic could be faithfully reproduced on a copier. In most of the embodiments, the covert characteristics are difficult to detect or copy on a glyph-by-glyph basis and preferably have negligible effect on the overt appearance of the glyph. (page 4, line 22-23)

Thus, by intermingling marks with covert characteristics and marks without the covert characteristics (again remembering that a human cannot readily distinguish between the marks with covert characteristics and those without the covert characteristics), copy- or counterfeit-resistant information can be placed on the original

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marking media such that a copy or counterfeit original would not include that information (paragraph starting on page 11, line 4). Because a motivated entity who has access to a taggant could still produce a counterfeit original, another aspect of the invention increases the difficulty of determining which marks with covert characteristics are used to carry information such as an authentication pattern (page 2, line 20 through page 3, line 3). Thus, marks having overt characteristics can be decoded to generate a first information that identifies the intended marks that have covert characteristics (and that themselves represent a second information –the covert code). This first and/or second information can also be encrypted (such that the marks having covert characteristics represent a covert code that can be decrypted). (Page 8, line 18 through page 9, line 8.) The figures attempt to distinguish between marks having overt characteristics and marks having covert characteristics (for which there would be no way to visually distinguish between) by artificially adding visible marks on the figures. The invention does not make such visibly distinguishable marks. Thus, Figure 1 is most representative of the actual appearance of a field of marks containing a mixture of covert and overt characteristics.

Figure 2 uses dashed glyphs to indicate which marks have a covert characteristic. Figure 3 indicates by a dot which of the marks that have the covert characteristic convey a covert code, for example, an authentication pattern. The overt characteristics of some selection of marks can provide information that can be used to extract the authentication pattern from the marks with the covert characteristic.

Applicant believes that the previous background information will help the Examiner better evaluate the claimed invention against the art. Applicant also believes the Examiner has misunderstood the meaning of covert characteristics as applied to marks and that that misunderstanding is pervasive through out the reasoning for the rejections.

I. Rejections under 35 USC §102(e)

Claims 1, 8-10, 12, 13, 19, 20, 25, 26, 28 and 29 stand rejected as being anticipated by Chang (US Patent 6,256,398).

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A prima facie case of anticipation is established when the Examiner provides a single reference that teaches or enables each of the claimed elements (arranged as in the claim) expressly or inherently as interpreted by one of ordinary skill in the art.

Applicant respectfully traverses this rejection to the claims as a prima facie case has not been established.

Currently amended claim 1 is directed to:

A record for marking encoded information comprising:

a marking medium;

first marks on said marking medium having a covert code characteristic, said first marks conveying a covertly marked code; said covert code characteristic including a feature of the covertly marked code that is visually undetectable by a human; and

second marks on said medium that convey an overtly marked code; said overtly marked code, when decoded, producing data for use in decoding said covertly marked code.

Chang does not anticipate currently amended claim 1 because:

- 1) Chang does not teach a covert code characteristic;
- 2) Chang does not teach the use of a covert code; and
- 3) Chang does not teach an overtly marked code that is decoded to produce data for use in decoding the covertly marked code.

Chang is directed to the problem of inserting embedded messages within a visual image (column 1, lines 34-46). Chang uses an arrangement of visible tiles to encode information within the visual image. Figure 8A, Figures 14B-E, Figures 14G-K, Figure 17 all show that Chang's tiles are visible. These visible tiles carry information. None of the marks that make up these tiles have a covert characteristic. All of them have overt characteristics. They can be seen, easily copied, and counterfeited.

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Figures 9a and 9b teach nothing about placing marks that have covert characteristics. They simply place marks that are not obtrusive to the casual viewer (column 10, lines 10-15; column 21, line 66- column 22, line 7). Nothing in the column 21, line 46 to column 22, line 8 citation teaches marks that have covert characteristics. Thus Chang does not teach a covert code characteristic.

Because Chang does not teach a covert code characteristic, it cannot teach the use of a covertly marked code that can be decoded from marks that have a covert code characteristic

Because Chang does not teach a covert code, it cannot teach an overtly marked code the produces data for use in decoding the covertly marked code.

Hence Chang does not anticipate **currently amended claim 1**. For similar reasons, Chang does not anticipate **currently amended claim 12**. Thus, applicant respectfully traverses the anticipation rejection applied to claims 1 and 12.

Because the independent claims are not anticipated, **claims 8-10, 13, 19, 20, 25, 26, 28 and 29** are not anticipated. Furthermore, claims 8, 19, 9, 20, 10, 13, 25, 28, 26 and 29 also rely directly or indirectly on the covert code characteristic that is not taught by Chang. Thus, applicant respectfully traverses the rational provided in each separate anticipation rejection.

II. Rejections under 35 USC §103(a)

Claims 2, 6, 14, and 18 stand rejected under 35 USC §103 as being unpatentable over Chang in view of Hecht (5,576,532). This rejection is respectfully traversed in view of the following arguments.

A prima facie case of obviousness is established by one or more references that were available to the inventor and that teach a suggestion to combine or modify the reference, the combination or modification of which would appear to be sufficient to have made the claimed invention obvious to one of the ordinary skill in the art.

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Currently amended claim 1 is directed to:

A record for marking encoded information comprising:

a marking medium;

first marks on said marking medium having a covert code characteristic, said first marks conveying a covertly marked code; said covert code characteristic including a feature of the covertly marked code that is visually undetectable by a human; and

second marks on said medium that convey an overtly marked code; said overtly marked code, when decoded, producing data for use in decoding said covertly marked code.

As previously discussed, Chang does not teach covert code characteristics. In addition Chang does not teach a suggestion to modify Chang to produce a covert code characteristic.

Hecht teaches self clocking glyph codes. Hecht does not teach, nor teach a suggestion to modify Hecht to produce a covert code characteristic.

Furthermore even when Chang and Hecht are combined they do not teach a suggestion that would lead one skilled in the art to the covert code characteristic that is a limitation in claims 1, 12, and 31. Thus, **claims 1 and 12 are patentable.**

Claims 2, 6, 14, and 18 depend on and further limit their respective parent claims and thus are also patentable. Thus, applicant respectfully traverses this rejection to **claims 2, 6, 14, and 18.** In addition, applicant respectfully traverses the reasoning for each of these rejections in light of the introductory remarks and the misunderstanding of the invention as neither Chang nor Hecht, separately or combined teach or teach a suggestion that would have made the claimed invention obvious to one skilled in the art.

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Claims 3 and 15 stand rejected under 35 USC §103(a) as being unpatentable over Chang in view of Wright (5,225,900). This rejection is respectfully traversed in view of the following arguments.

A prima facie case of obviousness is established by one or more references that were available to the inventor and that teach a suggestion to combine or modify the reference, the combination or modification of which would appear to be sufficient to have made the claimed invention obvious to one of the ordinary skill in the art.

Wright teaches the use of taggants to distinguish between different types of markings on a marking medium.

Claims 3 and 15 depend on and further limit their parent claims that are patentable. Thus, claims 3 and 15 are also patentable and applicant respectfully traverses this rejection to claims 3 and 15. In addition, while Wright teaches the use of taggants, it does not teach or suggest, alone or combined with Chang, the use of a covert code that can be decoded from marks having the covert characteristic, nor does it teach using an overtly marked code that can be decoded to produce data for decoding the covertly marked code. Neither Chang nor Wright, separately or combined teach or teach a suggestion that would have made the claimed invention obvious to one skilled in the art.

Claims 7 and 21 stand rejected under 35 USC §103(a) as being unpatentable over Chang in view of Moore (5,895,073). This rejection is respectfully traversed in view of the following arguments.

A prima facie case of obviousness is established by one or more references that were available to the inventor and that teach a suggestion to combine or modify the reference, the combination or modification of which would appear to be sufficient to have made the claimed invention obvious to one of the ordinary skill in the art.

Moore teaches the use of authentication data that can be seen under normal light, special light, or scanned to help reduce counterfeiting.

Claims 7 and 21 depend on and further limit their parent claims that are patentable. Thus, these claims are patentable and applicant respectfully traverses the

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rejection of **claims 7 and 21**. In addition, neither Chang nor Moore, separately or combined teach or teach a suggestion of using an overly marked code to provide data used in decoding the covertly marked code.

Claims 11, 27, 30, and 31 stand rejected under 35 USC §103(a) as being unpatentable over Chang. This rejection is respectfully traversed in view of the following arguments.

A prima facie case of obviousness is established by one or more references that were available to the inventor and that teach a suggestion to combine or modify the reference, the combination or modification of which would appear to be sufficient to have made the claimed invention obvious to one of the ordinary skill in the art.

Because claim 11 had been previously canceled but has been added as new claim 37, applicant will respond to the rejection applied to claim 11 with respect to claim 37.

New claim 37 depends on and further limits claim 1 that is patentable. Thus, claim 37 is patentable and applicant respectfully traverses this rejection to **claim 37** (formerly claim 11). In addition, applicant respectfully traverses the rationale for the rejection of claim 37(11) as the rejection appears to be based on a misunderstanding of the invention.

Claims 27 and 30 depend on and further limit their respective parent claims that are patentable. Thus, claims 27 and 30 are patentable and applicant respectfully traverses the rejection to **claims 27 and 30**. In addition, applicant respectfully traverses the rationale for the rejection of claims 27 and 30 as the rejection appears to be based on a misunderstanding of the invention.

Claim 31 is an independent claim.

A method for marking encoded information on a marking medium comprising the steps of:

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placing first marks on said medium having a covert code characteristic including a feature of the covertly marked code that is visually undetectable by a human; a subset of said first marks conveying a covertly marked code; and

placing second marks on said medium adapted to convey an overtly marked code; said overtly marked code, when decoded, producing an encrypted message and decryption data used by a secure server to decrypt the encrypted message; the decrypted message causing the secure server to produce decoding data indicating which ones of said first marks are included in the subset of said first marks that convey said covertly marked code.

Chang has previously been discussed. Nothing in Chang would teach or teach a suggestion to one skilled in the art to use the decrypted message to cause a server to produce decoding data that indicates which of the marks that have a covert code characteristic are to be decoded to produce a covertly marked code. Thus, applicant respectfully traverses the rejection to **claim 31**.

Claim 23 stands rejected under 35 USC §103(a) as being unpatentable over Chang in view of Parker (4,761,668). This rejection is respectfully traversed in view of the following arguments.

A prima facie case of obviousness is established by one or more references that were available to the inventor and that teach a suggestion to combine or modify the reference, the combination or modification of which would appear to be sufficient to have made the claimed invention obvious to one of the ordinary skill in the art.

Claim 23 depends on and further limits its parent claim that is patentable. Thus, claim 23 is patentable and applicant respectfully traverses the rejection to **claim 23**.

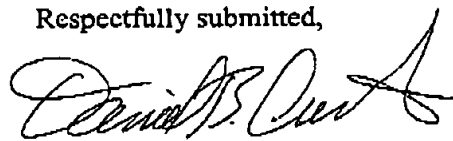
Applicant requests that the holding of finality be reversed responsive to the filing of a RCE. In addition, since all rejections, objections and requirements contained in the outstanding official action have been fully answered or traversed and shown to be inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 CFR §1.111(b) and such reconsideration is

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respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

Should any additional issues remain, or if I can be of any additional assistance, please do not hesitate to contact me at (650) 812-4259.

Respectfully submitted,



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